



WIRELESS TELECOMMUNICATIONS BUREAU

FACT SHEET

FEDERAL COMMUNICATIONS COMMISSION
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AUCTIONS FACT SHEET

Spectrum management authority in the United States is shared between the FCC and the Executive Branch. The FCC allocates and assigns frequencies for use by private and commercial entities other than the federal government. In the Omnibus Budget Reconciliation Act of 1993, Congress authorized the FCC to use competitive bidding procedures to award certain electromagnetic spectrum licenses. Previously the FCC issued spectrum licenses using either lengthy comparative hearings or lotteries. In a comparative hearing, two or more parties interested in a license would litigate before an administrative law judge. Applying a complex set of criteria, the judge would determine which applicant would best serve the public interest. Such decisions were often appealed to the full Commission, and in some cases to the U.S. Court of Appeals, with the process often taking years. FCC lotteries were conducted similar to state-run lotteries, with each applicant being assigned a certain number and the winner being determined by random selection. The lottery process fueled speculation in FCC licenses and in most cases lottery winners did not construct the systems authorized by those licenses. Instead, lottery winners often realized a windfall by selling their licenses in after-market transactions. This process delayed the initiation of service to the public and deprived the public the value of the spectrum.

Using auctions to award licenses enables the FCC to speed the licensing process. From initial application to license grant, licensing in fully-contested comparative hearings often took several years. Lotteries took well over a year to complete on average, and initiation of service was further delayed while lottery winners negotiated to transfer their licenses to entities truly interested in providing service. Auctions enable the winning bidders to bring new and innovative services to the marketplace more quickly, thereby stimulating competition, encouraging creation of new jobs and spurring economic growth. Auctions also enable the FCC to make new business opportunities fairly available to all members of the public.

In the two years since the FCC obtained auction authority, it has devised competitive bidding rules through a notice-and-comment rulemaking proceeding and conducted four separate auctions. As of July 1995, the FCC has granted hundreds of licenses for new wireless services through the auction process, and raised nearly \$9 billion for the U.S. Treasury.

Auction Designs

In developing its auction rules, the FCC sought to ensure that licenses are awarded to those bidders who value them most highly, and therefore can be expected to rapidly introduce valuable new services to the public. Since receiving auction authority, the FCC has tried both the traditional oral outcry auction design and a never-before-tried auction design -- the simultaneous multiple round auction.

Oral outcry auctions are familiar to most of us. An auctioneer stands at the front of a room, opens bidding on the first item and continues to auction items sequentially until the last item is sold. Bidders are generally present in the auction room and are able to increase their bids until the item is sold. The oral outcry method may be appropriate for spectrum auctions where there is little interdependence among the value of the licenses being auctioned (i.e., the value that a bidder will place on a particular license has little to do with the value of another license). The FCC used the oral outcry design in its auction of Interactive Video and Data Service licenses in July 1994.

Although the simultaneous multiple round auction design had never been used outside of laboratory experiments, the Commission determined that this auction method offered several important advantages over other auction methods where license values are interdependent. In simultaneous multiple round auctions, all interdependent licenses are put up for bid at the same time, and bidders have an opportunity to bid on as many licenses as they desire in successive discrete bidding rounds. Bidding generally remains open on all licenses until there are no new valid bids on any of the licenses being auctioned. Activity rules are used to ensure that bidders do not hold back from bidding until they see what values other bidders place on the licenses. In this regard, simultaneous multiple round auctions generate the maximum amount of information for bidders concerning license values and facilitate the award of the licenses to the bidder(s) who value them most highly. In addition, this auction method enables bidders to pursue efficiency enhancing back-up bidding strategies as more information becomes available about license values.

Simultaneous multiple round auctions are conducted electronically using an automated auction software program. Bidders may place their bids from remote locations either via computer or telephonically. In this regard, bidders are provided with maximum flexibility to place bids from their offices without being forced to remain in Washington for the duration of the auction.

Designated Entity Provisions in Auctions

In authorizing competitive bidding, Congress directed the Commission to "ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services" The FCC has developed a combination of provisions for the different auctions in response to this directive. These provisions are principally designed to enable these groups, referred to as "designated entities," to overcome difficulties they have historically encountered in attracting investment capital.

Congress also directed the Commission to take steps to avoid excessive concentration of licenses and disseminate licenses among a wide variety of applicants. To this end, the Commission has reserved frequency blocks C and F in Broadband Personal Communications Service, as "Entrepreneurs Blocks" with bidding limited to relatively smaller-sized companies who might otherwise have difficulty competing in an auction against the largest telecommunications firms. Generally, the C and F block broadband PCS auctions will be open only to firms that, together with their affiliates and attributable investors, have gross revenues of less than \$125 million in each of the last two years, and total assets below \$500 million. Thus, except for non-controlling investments in smaller firms, the largest telecommunications firms will not be able to compete for the 986 Basic Trading Area (BTA) licenses in the C and F blocks. In addition to these financial caps, special provisions have been adopted to benefit small businesses (with average annual gross revenues over the past three years of under \$40 million). These provisions include an exemption from the financial caps for small business consortia, a discounted upfront payment, a 25 bidding credit, a significantly reduced down payment on all winning bids, and enhanced installment financing. To facilitate construction of broadband PCS systems in rural areas, the FCC will also allow rural telephone companies to obtain geographically partitioned broadband PCS licenses.

Payments for Licenses

Each party whose initial application to participate in an auction has been accepted by the Commission must remit an upfront payment in order to be eligible to bid at the auction. This payment is necessary to ensure that only serious bidders participate in FCC auctions and to provide a source of funds from which the Commission may

collect any bid withdrawal or default penalties. The amount of the upfront payment applicable to each license is determined prior to each auction, and a bidder's maximum eligibility to bid in the auction is determined by the amount of its upfront payment. If a bidder is the winning bidder for a license(s), its upfront payment is retained and applied to their down payment on the license(s) won. If a bidder is not the winning bidder on any licenses, and has not incurred any bid withdrawal or default penalties, the upfront payment is refunded. At the present time, the Commission does not have authority to hold upfront payments in an interest-bearing account, so bidders do not earn interest on their upfront payments while these funds are held by the government.

Once an auction has closed and the high bidders have been announced, the winning bidders generally must submit a down payment on the licenses won within five business days. Shortly after making this down payment, each winner must file a long-form application for each license. If the application is acceptable to the Commission and no petitions to deny are filed against the application, the license will be granted, conditioned on payment of the remainder of the winning bid (or the remainder of the down payment, if the licensee is eligible for installment financing).

How Will We Know Who Won?

The winning bidders are announced by Public Notice shortly after the close of an auction. Winning bidders must submit their down payment within five business days of this notification.

Previous FCC Auctions

■ Nationwide Narrowband PCS Auction (July 25 - July 29, 1994)

The FCC held its first spectrum auction from July 25 to July 29, 1994. This auction was also the first to use simultaneous multiple round bidding. The FCC auctioned ten nationwide licenses to provide Narrowband Personal Communications Services (Narrowband PCS) in the 900 MHz band and awarded another through the pioneer's preference program. Narrowband PCS can be used to provide new services such as voice message paging, two-way acknowledgement paging in which a subscriber can receive a message and transmit a response back to the sender, and other data services. Five of these licenses are 50/50 KHz paired (two-way), three are 50/12.5 KHz paired, and three are 50 KHz unpaired.

Twenty nine bidders were qualified to bid in the nationwide Narrowband PCS auction. Each submitted a minimum upfront payment of \$350,000 in advance of the auction. The auction closed after 47 rounds, with bids for the ten licenses totaling \$617,006,674. In addition, the U.S. government received an additional \$33,300,000 for the nationwide Narrowband PCS license that was awarded prior to the auction pursuant to the Commission's pioneer's preference program. All of the nationwide Narrowband PCS licenses have been granted.

Winners of the nationwide Narrowband PCS licenses were authorized to provide service over all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands.

■ IVDS Auction (July 28-29, 1994)

On July 28 and 29, 1994, the FCC held its second auction -- for 594 Interactive Video and Data Services (IVDS) licenses in the 218-219 MHz band. IVDS can be delivered through broadcast and cable television, microwave, or direct broadcast satellite technologies. When it is available, it will be offered on a subscription basis.

The FCC anticipates that IVDS will assist in providing affordable interactive television services such as home banking, home shopping, and educational and pay-per-view programming on a commercial basis. To access these systems, wireless or coaxial devices not unlike cable converter boxes would likely be used in conjunction with hand-held remote controls.

The July 1994 IVDS auction offered two 500 KHz licenses in each of 297 Metropolitan Statistical Areas (MSAs). Since the value of IVDS licenses was expected to be relatively low and there was less interdependence among license values, the FCC used an open outcry auction design for these licenses. Both licensees in a market were put up for auction at the same time, with the highest bidder given a choice between the two available licenses

and the second highest bidder winning the remaining license.

More than 95% of all IVDS licenses were won by small businesses or businesses owned by members of minority groups or women who were able to take advantage of the special provisions for designated entities discussed above.

The FCC auctioned all 594 licenses within two days. Licenses have been granted to all of the IVDS bidders that satisfied the applicable payment deadlines and whose applications were not contested.

■ **Regional Narrowband PCS Auction (October 26 - November 8, 1994)**

From October 26 through November 8, 1994, the FCC auctioned 30 regional Narrowband PCS licenses -- six licenses in each of five regions of the United States. Two licenses in each region are 50/50 KHz paired and the remaining four are 50/12.5 KHz paired. Twenty-eight bidders qualified to bid.

The regional Narrowband PCS auction was the first to use a new computerized auction system that allowed bidders to participate in the auction either on-site at the FCC's auction headquarters or from remote locations via computer or telephonically. The auction closed after 105 rounds of bidding and raised \$490,901,787 in gross revenues (including a bid withdrawal penalty of \$2,128,987). This auction also provided special opportunities for small businesses and women and minority bidders in the form of bidding credits and installment financing. Eleven of the 30 licenses were won by small businesses owned by members of minority groups or women. Net of bidding credits, the total revenue from this auction was \$394,835,784. Four bidders successfully aggregated the same frequency block in each of the five regions, thereby creating four additional nationwide service competitors.

All of the regional Narrowband PCS licenses have been granted.

■ **MTA Broadband PCS Auction (December 5, 1994 - March 13, 1995)**

On December 5, 1994, the FCC began its first auction of licenses to provide personal communications services in the 2 GHz band (Broadband PCS). Broadband PCS encompasses a variety of mobile and/or portable radio services -- using such devices as small lightweight, multifunction portable phones, portable fax machines, and advanced devices with two-way data capabilities -- that are expected to compete with existing cellular, paging and other land mobile services. Broadband PCS is expected to make affordable to a majority of the American public new communications services that are currently affordable only to business users and the affluent.

In this auction, the FCC offered for bid Broadband PCS licenses that authorize service in each of 51 Major Trading Areas (MTAs) covering the entire United States and its territories. (MTAs are based on designations contained in the Rand McNally Commercial Atlas and Marketing Guide.) Licenses in both frequency blocks A and B were auctioned in 48 MTAs, and in the other three MTAs, only the block B license was auctioned. In those three MTAs (New York, Los Angeles, and Washington-Baltimore), the block A license was previously awarded to companies under the Commission's pioneer's preference rules. Therefore, a total of 99 licenses were auctioned.

Thirty bidders qualified to bid in the auction. The auction ended on March 3, 1995 lasting over 112 rounds conducted over more than three months. Eighteen bidders won licenses. The December Broadband PCS auction did not include special provisions for women and minority-owned businesses.

The MTA Broadband PCS auction generated more than \$7.7 billion for the U.S. Treasury (including revenue to be collected from the pioneer's preference winners). All of the MTA winners have been granted their licenses.

Upcoming C Block Broadband PCS Auction

The FCC soon plans to begin the largest spectrum auction yet attempted -- 493 Broadband PCS licenses, one in each of Basic Trading Area covering the entire United States and its territories. This auction will also be the first auction of so-called "Entrepreneurs' Block" Broadband PCS licenses. The Commission designated Broadband PCS frequency blocks C and F as "entrepreneurs' blocks" to fulfill the Congress's directive to disseminate licenses widely and provide opportunities for designated entities. As noted above, bidding in this auction will be open only to

firms that, together with their affiliates, have gross revenues of less than \$125 million in each of the last two years, and total assets below \$500 million. Special bidding credits and installment payment plans also will be available to small businesses.

Future Auctions

Before the end of 1995, the Commission plans to conduct an auction of 493 BTA licenses in the Multipoint Distribution Service (MDS). The FCC is planning auctions of licenses in several other services over the next few years, including the Location and Monitoring Service (LMS), the Specialized Mobile Radio services in the 800 MHz and 900 MHz bands, commercial 220 MHz service, and the General Wireless Communications Service (GWCS) in the 4 GHz band, among others. The FCC is currently developing the timetable and rules for a number of these upcoming auctions. There are 1,343 remaining Narrowband PCS licenses to be auctioned, and 1,479 BTA licenses in Broadband PCS frequency blocks D, E, and F will also be put up for bid. Nine hundred IVDS licenses to serve rural areas remain to be auctioned.

The FCC's authority to conduct spectrum auctions is statutorily limited to five years, running until August 1998. There is, however, proposed legislation on Capitol Hill that would expand the FCC's auction authority to the year 2000.

For further information, phone (202) 418-1400.

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